AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1(Original). A method of treating acne and/or hirsutism comprising the step of delivering to a mammal in need thereof a composition comprising a compound of formula I, or a tautomer thereof, and a physiologically compatible carrier, wherein formula I is:

$$\mathbb{R}^{5}$$
 \mathbb{R}^{4}
 \mathbb{R}^{3}
 \mathbb{R}^{3}

wherein:

R¹ and R² are selected from the group consisting of H, alkyl, substituted alkyl, OH, O(alkyl), O(substituted alkyl), O(Acetyl), aryl, substituted aryl, heterocyclic ring, substituted heterocyclic ring, alkylaryl, substituted alkylaryl, alkylheteroaryl, substituted alkylheteroaryl, 1-propynyl, substituted 1-propynyl, 3-propynyl, and substituted 3-propynyl;

or R¹ and R² are joined to form a ring selected from the group consisting of -CH₂(CH₂)_nCH₂-, -CH₂CH₂C(CH₃)₂CH₂CH₂-, -O(CH₂)_mCH₂-, -O(CH₂)_pO-, -CH₂CH₂OCH₂CH₂-, -CH₂CH₂N(H)CH₂CH₂-, and -CH₂CH₂N(alkyi)CH₂CH₂-;

m is an integer from 1 to 4;

n is an integer from 1 to 5;

p is an integer from 1 to 4;

or \mathbb{R}^1 and \mathbb{R}^2 form a double bond to $C(CH_3)_2$, C(cycloalkyl), O, or C(cycloether);

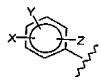
 R^3 is selected from the group consisting of H, OH, NH₂, C₁ to C₆ alkyl, substituted C₁ to C₆ alkyl, C₃ to C₆ alkenyl, substituted C₃ to C₆ alkenyl, alkynyl, substituted alkynyl, and COR^A;

 \mathbb{R}^A is selected from the group consisting of H, C₁ to C₃ alkyl, substituted C₁ to C₃ alkyl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ aminoalkyl, and substituted C₁ to C₃ aminoalkyl;

 R^4 is selected from the group consisting of H, halogen, CN, NH₂, C₁ to C₆ alkyl, substituted C₁ to C₆ alkyl, C₁ to C₆ alkoxy, substituted C₁ to C₆ alkoxy, C₁ to C₆ aminoalkyl, and substituted C₁ to C₆ aminoalkyl;

R⁵ is selected from the group consisting of a), b) and c):

a) a substituted benzene ring having the structure:



X is selected from the group consisting of halogen, OH, CN, C₁ to C₃ alkyl, substituted C₁ to C₃ alkyl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ thioalkyl, substituted C₁ to C₃ thioalkyl, S(O)alkyl, S(O)₂alkyl, C₁ to C₃ aminoalkyl, substituted C₁ to C₃ aminoalkyl, NO₂, C₁ to C₃ perfluoroalkyl, substituted C₁ to C₃ perfluoroalkyl, 5 or 6 membered heterocyclic ring having 1 to 3 heteroatoms, CONH₂, CSNH₂, CNHNHOH, CNH₂NOH, CNHNOH, COR^B, CSR^B, OCOR^B, and NR^CCOR^B;

 R^B is selected from the group consisting of H, C₁ to C₃ alkyl, substituted C₁ to C₃ alkyl, aryl, substituted aryl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ aminoalkyl, and substituted C₁ to C₃ aminoalkyl;

RC is H, C1 to C3 alkyl, or substituted C1 to C3 alkyl;

Y and Z are independently selected from the group consisting of H, halogen, CN, NO₂, C_1 to C_3 alkoxy, substituted C_1 to C_3 alkoxy, C_1 to C_4 alkyl, substituted C_1 to C_4 alkyl, C_1 to C_3 thioalkyl, and substituted C_1 to C_3 thioalkyl;

b) a five or six membered heterocyclic ring comprising 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, SO₂ and NR⁶ and having one or two

independent substituents from the group consisting of H, halogen, CN, NO₂, C₁ to C₄ alkyl, substituted C₁ to C₄ alkyl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ aminoalkyl, substituted C₁ to C₃ aminoalkyl, COR^D, CSR^D, and NR^ECOR^D;

 R^D is H, NH₂, C₁ to C₃ alkyl, substituted C₁ to C₃ alkyl, aryl, substituted aryl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ aminoalkyl, or substituted C₁ to C₃ aminoalkyl;

 R^E is H, C_1 to C_3 alkyl, or substituted C_1 to C_3 alkyl; R^G is H, C_1 to C_3 alkyl, substituted C_1 to C_3 alkyl, or C_1 to C_4CO_2 alkyl; or

c) an indol-4-yl, indol-7-yl or benzo-2-thiophene moiety, wherein said moiety is optionally substituted by from 1 to 3 substituents selected from the group consisting of halogen, alkyl, substituted alkyl, CN, NO₂, alkoxy, substituted alkoxy, and CF₃;

Q1 is S, NR7, or CR8R9;

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 R^7 is selected from the group consisting of CN, C_1 to C_6 alkyl, substituted C_1 to C_6 alkyl, C_3 to C_8 cycloalkyl, substituted C_3 to C_8 cycloalkyl, aryl, substituted aryl, heterocyclic ring, substituted heterocyclic ring, acyl, substituted acyl, aroyl, substituted aroyl, SO_2CF_3 , OR^{11} and $NR^{11}R^{12}$;

 R^8 and R^9 are independent substituents selected from the group consisting of H, alkyl, substituted alkyl, acyl, substituted acyl, aroyl, substituted aroyl, C_3 to C_8 cycloalkyl, substituted C_3 to C_8 cycloalkyl, aryl, substituted aryl, heterocyclic ring, substituted heterocyclic ring, NO_2 , CN, and CO_2R^{10} ;

 R^{10} is C_1 to C_3 alkyl or substituted C_1 to C_3 alkyl; or CR^8R^9 comprise a six membered ring having the structure:

R¹¹ and R¹² are independently selected from the group consisting of H, alkyl, substituted alkyl, aryl, substituted aryl, heterocyclic ring, substituted heterocyclic ring, acyl, substituted acyl, aroyl, substituted aroyl, sulfonyl, and substituted sulfonyl; or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

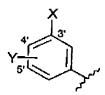
2(Original). The method according to Claim 1, wherein:

R¹ and R² are joined to form a -CH₂(CH₂)_nCH₂- ring;

n is 3;

R3 and R4 are H;

R⁵ is the substituted benzene ring having the structure:



X is selected from the group consisting of halogen, CN, CONH₂, CSNH₂, COR^B, CSR^B, C₁ to C₃ alkoxy, C₁ to C₃ alkyl, NO₂, C₁ to C₃ perfluoroalkyl, 5 membered heterocyclic ring comprising 1 to 3 heteroatoms, and C₁ to C₃ thioalkyl;

 R^B is C_1 to C_3 aminoalkyl or substituted C_1 to C_3 aminoalkyl, wherein said aminoalkyl is NH(alkyl) or N(alkyl)₂;

Y is selected from the group consisting of H, halogen, CN, NO₂, C_1 to C_3 alkoxy, C_1 to C_4 alkyl, and C_1 to C_3 thioalkyl.

3(Original). The method according to Claim 1, wherein:

R¹ and R² are joined to form the -CH₂(CH₂)_nCH₂- ring;

n is 3;

R3 and R4 are H;

R⁵ is the five membered ring having the structure:



U is O, S, or NR6;

X' is selected from the group consisting of halogen, CN, NO₂, CONH₂, CSNH₂, COR^B, CSR^B, C₁ to C₃ alkyl, and C₁ to C₃ alkoxy;

 R^B is C_1 to C_3 aminoalkyl or substituted C_1 to C_3 aminoalkyl, wherein said aminoalkyl is NH(alkyl) or N(alkyl)₂;

Y' is selected from the group consisting of H, halogen, and C_1 to C_4 alkyl, wherein said halogen is F.

4(Original). The method according to Claim 1, wherein:

R¹ and R² are joined to form a -CH₂(CH₂)_nCH₂- ring;

n is 3;

R³ and R⁴ are H;

R⁵ is the six membered ring having the structure:



X' is N or CX2;

X2 is halogen, CN, CONH2, CSNH2, CORB, CSRB, or NO2;

 R^B is C_1 to C_3 aminoalkyl or substituted C_1 to C_3 aminoalkyl, wherein said aminoalkyl is NH(alkyl) or N(alkyl)₂.

5(Original). The method according to claim 1, wherein:

R1 and R2 are alkyl or substituted alkyl;

 \mathbb{R}^3 is H.

6(Original). The method according to claim 1, wherein:

R¹ and R² are joined to form a ring selected from the group consisting of

-CH₂(CH₂)_nCH₂-, -CH₂CH₂C(CH₃)₂CH₂CH₂-, -O(CH₂)_mCH₂-, -O(CH₂)_pO-,

-CH₂CH₂OCH₂CH₂-, -CH₂CH₂N(H)CH₂CH₂-, and -CH₂CH₂N(alkyl)CH₂CH₂-;

R³ is H.

7(Original). The method according to claim 1, wherein: R^3 is H; Q^1 is S or NR^7 .

8(Original). The method according to claim 1, wherein the compound is delivered orally.

9(Previously Presented). The method according to claim 1, wherein said compound of formula I is selected from the group consisting of 5'-(3-Chlorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-thione, 3-(1',2'-Dihydro-2'thioxospiro[cyclohexane-1,3'-[3H]indol]-5'-yl)benzonitrile, 4-1',2'-Dihydro-2'thioxospiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-2-thiophenecarbonitrile, 3-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-5-fluorobenzonitrile, 4-Methyl-5-(1,2dihydro-2-thioxospiro[cyclohexane-1,3-[3H]-indol]-5-yl)-2-thiophenethioamide, 5-(1,2-Dihydro-2-thioxospiro[cyclopentane-1,3-[3H]indol]-5'-yl)-1H-pyrrole-2-carbonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-1-(text-butoxycarbonyl)pyrrole-2-carbonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-1-H-pyrrole-2-carbonitrile, 5-(2'-thioxospiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-1-methylpyrrole-2-carbonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclopentane-1,3-[3H]indol]-5-yl)-3thiophenecarbonitrile, 5-(1,2-Dihydro-thioxospiro[cyclopentane-1,3-[3H]indol]-5-yl)-2thiophenecarbonitrile, 5-(3-Fluoro-4-methoxyphenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(2-Amino-5-pyrimidinyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)thione, 3-(1,2-Dihydro-2-thioxospiro[cyclopentane-1,3-[3H]indol]-5-yl)-52155405818

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fluorobenzonitrile, 5-(3-chlorophenyl)-3,3-dimethyl-1,3-dihydro-2H-indole-2-thione, 3-Benzyl-5-(3-chlorophenyl)-3-methyl-1,3-dihydro-2H-indole-2-thione, 4-(3,3-dimethyl-2thioxo-2,3-dihydro-1H-indol-5-yl)-2-furonitrile, 5-(3-methoxyphenyl)-3,3-dimethyl-1,3dihydro-2H-indole-2-thione, 3-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-4-fluorobenzonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5yl)-3-pyridinecarbonitrile, 5-(3,4-Difluorophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(5-Chloro-2-thienyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-3-furancarbonitrile, 5-(3-Chloro-4-fluorophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(3-Chloro-5fluorophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(3,5-Difluorophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(1,2-Dihydro-2thioxospiro[cyclohexanc-1,3-[3H]indol]-5-yl)-4-propyl-2-thiophenecarbonitrile, 5-(3-Fluoro-4-nitrophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 4-(1,2-Dihydro-2thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-2-furancarbonitrile, 5"-(3-Chlorophenyl)spiro[cyclobutane-1,3"-[3H]indol]-2"(1"H)-thione, 5"-(2-Chlorophenyl)spiro[cyclohexane-1,3"-[3H]indol]-2"(1"H)-thione, 5"-(4-Chlorophenyl)spiro[cyclohexane-1,3"-[3H]indol]-2"(1"H)-thione, 5-(1",2"-Dihydro-2"-thioxospiro[cyclohexane-1,3"-[3H]indol]-5"-yl)-4-mcthyl-2thiophenecarbonitrile, 5-(1",2"-Dihydro-2"-thioxospiro[cyclohexane-1,3"-[3H]indol]-5"yl)-2-thiophenecarbonitrile, 5"-(3-Fluorophenyl)spiro[cyclohexane-1,3"-[3H]indol]-2"(1"H)-thione, 5-(3-Hydroxyphenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(3-chlorophenyl)-3,3-diethyl-1,3-dihydro-2H-indole-2-thione, 5-(4-Fluoro-3-(trifluoromethyl)phenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 4-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-2-fluorobenzonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-4-n-butyl-2thiophenecarbonitrile, 5-(3-Fluoro-5-methoxyphenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(3-Chlorophenyl)-N-hydroxyspiro[cyclohexane-1,3'-[3H]indol]-2-amine, N-(Acetyloxy)-5'-(3-chlorophenyl)spiro[cyclohexanc-1,3'-[3H]indol]-2"amine, 5'-(3-Fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(2-

Fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(4-Fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3,4-difluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3-methoxyphenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3-nitrophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3-cyanophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 3-(1',2'-Dihydro-2'-(hydroxyimino)spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-5fluorobenzonitrile, 5-(Spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-4methyl-2-thiophenecarbonitrile, 5-(Spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-2-thiophenecarbonitrile, 4-(Spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-2-thiophenecarbonitrile, 5-(Spiro[cyclohexanc-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-1H-pyrrole-1-methyl-2-carbonitrile, 5-(spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-1H-pyrrole-2-carbonitrile, 4-(Spiro[cyclohexane-1,3'-[3H]indol]-2'(acetoxyimino)-5'-yl)-2-thiophenecarbonitrile, 3-Fluoro-N'-hydroxy-5-(2'-(hydroxyamino)spiro[cyclohexane-1,3'-[3H]indol]-5'yl)benzenecarboximidamide, N'-Hydroxy-5-(spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-4-methyl-2-thiophenecarboximidamide, N'-Hydroxy-4-(spiro[cyclohexane-1,3'-[3H]indol]-2'-hydroxyimino)-5'-yl-2thiophenecarboximidamide, N'-Hydroxy-5-(spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-2-thiophenecarboxidamide, 5'-(3-Chlorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenccyanamide, 5'-(3-Cyano-5fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 5'-(5-Cyano-1Hpyrrol-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2-ylidenecyanamide, 5'-(5-Cyanothiophen-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 5'-(5-Cyano-3methyl-thiophen-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 5'-(5-Cyano-thiophen-3-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 3-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-5-fluoro-benzonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-1H-pyrrole-2-carbonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-1-methyl-1H-pyrrole-2-

carbonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-thiophene-2-carbonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-4-methyl-thiophene-2-carbonitrile, and 4-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-thiophene-2-carbonitrile, or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

10(Previously Presented). The method according to claim 1, wherein said compound is 5'-(5-Cyano-1-methyl-1H-pyrrol-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

11(Original). A method of treating acne and/or hirsutism comprising the step of delivering to a mammal in need thereof a composition comprising a compound of formula II, or a tautomer thereof, and a physiologically compatible carrier, wherein formula II is:

wherein:

R¹¹ is selected from the group consisting of H, acyl, substituted acyl, aroyl, substituted aroyl, sulfonyl, and substituted sulfonyl:

R⁵ is (i), (ii), or (iii):

(i) a substituted benzene ring having the structure:

wherein:

X is selected from the group consisting of halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂, CNHNHOH, CNH₂NOH, C₁ to C₃ alkoxy, C₁ to C₃ alkyl, NO₂, C₁ to C₃ perfluoroalkyl, 5 membered heterocyclic ring comprising 1 to 3 heteroatoms, and C₁ to C₃ thioalkyl;

Y is selected from the group consisting of H, halogen, CN, NO₂, C_1 to C_3 alkoxy, C_1 to C_4 alkyl, and C_1 to C_3 thioalkyl;

(ii) a five membered ring having the structure:

wherein:

U is O, S, or NR6;

R⁶ is H, C₁ to C₃ alkyl, or C₁ to C₄ CO₂alkyl;

X' is selected from the group consisting of halogen, CN, NO₂, CONH₂, CNHNHOH, CNH₂NOH, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂. C₁ to C₃ alkyl, and C₁ to C₃ alkoxy;

Y' is selected from the group consisting of H, F, and C₁ to C₄ alkyl; or (iii) a six membered ring having the structure:

wherein:

 X^1 is N or CX^2 ;

 X^2 is halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂ or NO₂;

or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

12(Original). The method according to claim 11, wherein \mathbb{R}^5 is said five membered ring and U is O or S.

13(Original). A method of treating acne and/or hirsutism comprising the step of delivering to a mammal in need thereof a composition comprising a compound of formula III, or a tautomer thereof, and a physiologically compatible carrier, wherein formula III is:

whercin:

R⁵ is (i), (ii), or (iii):

(i) a substituted benzene ring having the structure:

wherein:

X is selected from the group consisting of halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂, CNHNOH, C₁ to C₃ alkoxy, C₁ to C₃ alkyl, NO₂, C₁ to C₃ perfluoroalkyl, 5 membered heterocyclic ring comprising 1 to 3 heteroatoms, and C₁ to C₃ thioalkyl;

Y is selected from the group consisting of H, halogen, CN, NO₂, C₁ to C₃ alkoxy, C₁ to C₄ alkyl, and C₁ to C₃ thioalkyl;

(ii) a five membered ring having the structure:

wherein:

U is O, S, or NR6;

R6 is H, C1 to C3 alkyl, or C1 to C4 CO2alkyl;

X' is selected from the group consisting of halogen, CN, NO₂, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂, C₁ to C₃ alkyl, and C₁ to C₃ alkoxy;

Y' is selected from the group consisting of H, F and C_1 to C_4 alkyl; or (iii) a six membered ring having the structure:



wherein:

X1 is N or CX2;

X² is halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂ or NO₂; or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

14(Original). The method according to claim 13, wherein \mathbb{R}^5 is the five membered ring (ii) and U is O or S.

15(Original). A method of treating acne and/or hirsutism comprising the step of delivering to a mammal in need thereof a composition comprising a compound of formula IV, or a tautomer thereof, and a physiologically compatible carrier, wherein formula IV is:

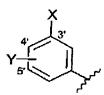
wherein:

R⁸ is selected from the group consisting of H, CO₂R¹⁰, acyl, substituted acyl, aroyl, substituted aroyl, alkyl, substituted alkyl, and CN;

 R^{10} is C_1 to C_3 alkyl;

R⁵ is (i), (ii), or (iii):

(i) a substituted benzene ring having the structure:



wherein:

X is selected from the group consisting of halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂, CNHNOH, C₁ to C₃ alkoxy, C₁ to C₃ alkyl, NO₂, C₁ to C₃ perfluoroalkyl, 5 membered heterocyclic ring comprising 1 to 3 heteroatoms, and C₁ to C₃ thioalkyl;

Y is selected from the group consisting of H, halogen, CN, NO₂, C_1 to C_3 alkoxy, C_1 to C_4 alkyl, and C_1 to C_3 thioalkyl;

(ii) a five membered ring having the structure:

wherein:

U is O, S, or NR⁶; R⁶ is H, C₁ to C₃ alkyl, or C₁ to C₄ CO₂alkyl;

X' is selected from the group consisting of halogen, CN, NO₂, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂, C₁ to C₃ alkyl, and C₁ to C₃ alkoxy;

Y' is selected from the group consisting of H, F and C1 to C4 alkyl;

(iii) a six membered ring having the structure:

wherein:

 X^1 is N or CX^2 ;

X² is halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂ or NO₂; or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

16(Original). The method according to claim 15, wherein R⁵ is the five-membered ring (ii) and U is O or S.

17(Original). A method of treating acne and hirsutism comprising the step of delivering to a mammal in need thereof a composition comprising a compound of formula V, or a tautomer thereof, and a physiologically compatible carrier, wherein formula V is:

R⁵ is (i), (ii), or (iii):

(i) a substituted benzene ring having the structure:

wherein:

X is selected from the group consisting of halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂, CNHNOH, C₁ to C₃ alkoxy, C₁ to C₃ alkyl, NO₂, C₁ to C₃ perfluoroalkyl, 5 membered heterocyclic ring comprising 1 to 3 heteroatoms, and C₁ to C₃ thioalkyl;

Y is selected from the group consisting of H, halogen, CN, NO₂, C_1 to C_3 alkoxy, C_1 to C_4 alkyl, and C_1 to C_3 thioalkyl;

(ii) a five membered ring having the structure:



wherein:

U is O, S, or NR6;

 R^6 is H, C_1 to C_3 alkyl, or C_1 to C_4 CO2alkyl;

X' is selected from the group consisting of halogen, CN, NO₂, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)₂, CSN(alkyl)₂, C₁ to C₃ alkyl, and C₁ to C₃ alkoxy;

Y' is selected from the group consisting of H, F, and C1 to C4 alkyl;

(iii) a six membered ring having the structure:

wherein:

 X^1 is N or CX^2 ;

X² is halogen, CN, CONH₂, CSNH₂, CONHalkyl, CSNHalkyl, CON(alkyl)2, CSN(alkyl)2 or NO2; or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

18-19(Canceled).

20(Previously Presented). The method according to claim 22, wherein: R1 and R2 are alkyl or substituted alkyl; \mathbb{R}^3 is \mathbb{H} .

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21(Previously Presented). The method according to claim 22, wherein: R^1 and R^2 are joined to form a ring selected from the group consisting of -CH₂(CH₂)_nCH₂-, -CH₂CH₂C(CH₃)₂CH₂CH₂-, -O(CH₂)_mCH₂-, -O(CH₂)_pO-, $-CH_2CH_2OCH_2CH_2-, -CH_2CH_2N(H)CH_2CH_2-, \ and \ -CH_2CH_2N(alkyl)CH_2CH_2-; \\$ \mathbb{R}^3 is H.

22(Previously Presented). The method according to claim 22, wherein: R^3 is H; Q¹ is S or NR⁷.

23(Previously Presented). A method of conditioning the skin comprising the step of delivering to a mammal in need thereof a composition comprising:

- a skin conditioning component; and (i)
- a compound of formula I, or a tautomer thereof: (ii)

$$R^{5}$$
 R^{4}
 R^{3}
 R^{3}

wherein:

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R¹ and R² are selected from the group consisting of H, alkyl, substituted alkyl, OH, O(alkyl), O(substituted alkyl), O(Acetyl), aryl, substituted aryl, heterocyclic ring, substituted heterocyclic ring, alkylaryl, substituted alkylaryl, alkylheteroaryl, substituted alkylheteroaryl, 1-propynyl, substituted 1-propynyl, 3-propynyl, and substituted 3-propynyl;

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or R¹ and R² are joined to form a ring selected from the group consisting of -CH₂(CH₂)_nCH₂-, -CH₂CH₂C(CH₃)₂CH₂CH₂-, -O(CH₂)_mCH₂-, -O(CH₂)_pO-, -CH₂CH₂OCH₂-, -CH₂CH₂N(H)CH₂CH₂-, and -CH₂CH₂N(alkyl)CH₂CH₂-;

m is an integer from 1 to 4;

n is an integer from 1 to 5;

p is an integer from 1 to 4;

or R1 and R2 form a double bond to C(CH3)2, C(cycloalkyl), O, or C(cyclocther);

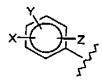
 R^3 is selected from the group consisting of H, OH, NH₂, C₁ to C₆ alkyl, substituted C₁ to C₆ alkyl, C₃ to C₆ alkenyl, substituted C₃ to C₆ alkenyl, alkynyl, substituted alkynyl, and COR^A:

 \mathbb{R}^{Λ} is selected from the group consisting of H, C₁ to C₃ alkyl, substituted C₁ to C₃ alkyl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ aminoalkyl, and substituted C₁ to C₃ aminoalkyl;

 R^4 is selected from the group consisting of H, halogen, CN, NH₂, C₁ to C₆ alkyl, substituted C₁ to C₆ alkyl, C₁ to C₆ alkoxy, substituted C₁ to C₆ alkoxy, C₁ to C₆ aminoalkyl, and substituted C₁ to C₆ aminoalkyl;

R⁵ is selected from the group consisting of a), b) and c):

a) a substituted benzene ring having the structure:



X is selected from the group consisting of halogen, OH, CN, C_1 to C_3 alkyl, substituted C_1 to C_3 alkyl, C_1 to C_3 alkoxy, substituted C_1 to C_3 alkoxy, C_1 to C_3

thioalkyl, substituted C₁ to C₃ thioalkyl, S(O)alkyl, S(O)₂alkyl, C₁ to C₃ aminoalkyl, substituted C₁ to C₃ aminoalkyl, NO₂, C₁ to C₃ perfluoroalkyl, substituted C₁ to C₃ perfluoroalkyl, 5 or 6 membered heterocyclic ring comprising 1 to 3 heteroatoms, CONH₂, CSNH₂, CNHNHOH, CNH₂NOH, CNHNOH, COR^B, CSR^B, OCOR^B, and NR^CCOR^B;

 R^B is selected from the group consisting of H, C_1 to C_3 alkyl, substituted C_1 to C_3 alkyl, aryl, substituted aryl, C_1 to C_3 alkoxy, substituted C_1 to C_3 alkoxy, C_1 to C_3 aminoalkyl, and substituted C_1 to C_3 aminoalkyl;

R^C is H, C₁ to C₃ alkyl, or substituted C₁ to C₃ alkyl;

Y and Z are independently selected from the group consisting of H, halogen, CN, NO₂, C_1 to C_3 alkoxy, substituted C_1 to C_3 alkoxy, C_1 to C_4 alkyl, substituted C_1 to C_4 alkyl, C_1 to C_3 thioalkyl, and substituted C_1 to C_3 thioalkyl;

b) a five or six membered heterocyclic ring comprising 1, 2, or 3 heteroatoms selected from the group consisting of O, S, SO, SO₂ and NR⁶ and having one or two independent substituents from the group consisting of H, halogen, CN, NO₂, C₁ to C₄ alkyl, substituted C₁ to C₄ alkyl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ aminoalkyl, substituted C₁ to C₃ aminoalkyl, COR^D, CSR^D, and NR^ECOR^D;

 R^D is H, NH₂, C₁ to C₃ alkyl, substituted C₁ to C₃ alkyl, aryl, substituted aryl, C₁ to C₃ alkoxy, substituted C₁ to C₃ alkoxy, C₁ to C₃ aminoalkyl, or substituted C₁ to C₃ aminoalkyl;

 R^{E} is H, C_1 to C_3 alkyl, or substituted C_1 to C_3 alkyl;

 R^6 is H, C_1 to C_3 alkyl, substituted C_1 to C_3 alkyl, or C_1 to C_4CO_2 alkyl; or

c) an indol-4-yl, indol-7-yl or benzo-2-thiophene moiety, wherein said moiety is optionally substituted by from 1 to 3 substituents selected from the group consisting of halogen, alkyl, substituted alkyl, CN, NO₂, alkoxy, substituted alkoxy, and CF₃;

 Q^1 is S, NR^7 , or CR^8R^9 ;

 R^7 is selected from the group consisting of CN, C_1 to C_6 alkyl, substituted C_1 to C_6 alkyl, C_3 to C_8 cycloalkyl, substituted C_3 to C_8 cycloalkyl, aryl, substituted aryl,

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heterocyclic ring, substituted heterocyclic ring, acyl, substituted acyl, aroyl, substituted acyl, aroyl, substituted acyl, Ro₂CF₃, OR¹¹ and NR¹¹R¹²:

 R^8 and R^9 are independent substituents selected from the group consisting of H, C_1 to C_6 alkyl, substituted C_1 to C_6 alkyl, C_3 to C_8 cycloalkyl, substituted C_3 to C_8 cycloalkyl, aryl, substituted aryl, heterocyclic ring, substituted heterocyclic ring, NO_2 , CN, and CO_2R^{10} ;

R¹⁰ is C₁ to C₃ alkyl or substituted C₁ to C₃ alkyl; or CR⁸R⁹ comprise a six membered ring having the structure:

R¹¹ and R¹² are independently selected from the group consisting of H, alkyl, substituted alkyl, aryl, substituted aryl, heterocyclic ring, substituted heterocyclic ring, acyl, substituted acyl, aroyl, substituted aroyl, sulfonyl, and substituted sulfonyl; or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

24(Previously Presented). The method according to claim 23 wherein said compound of formula I is selected from the group consisting of 5'-(3-Chlorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-thione, 3-(1',2'-Dihydro-2'-thioxospiro[cyclohexane-1,3'-[3H]indol]-5'-yl)benzonitrile, 4-1',2'-Dihydro-2'-thioxospiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-2-thiophenecarbonitrile, 3-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-5-fluorobenzonitrile, 4-Methyl-5-(1,2-dihydro-2-thioxospiro[cyclohexane-1,3-[3H]-indol]-5-yl)-2-thiophenethioamide, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5'-yl)-1H-pyrrole-2-carbonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-1-(tert-butoxycarbonyl)-pytrole-2-carbonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-1-methyl-pyrrole-2-carbonitrile, 5-(2'-thioxospiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-1-methyl-pyrrole-2-carbonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclopentane-1,3-[3H]indol]-5-yl)-1-methyl-pyrrole-2-carbonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclopentane-1,3-[3H]indo

3thiophenecarbonitrile, 5-(1,2-Dihydro-thioxospiro[cyclopentane-1,3-[3H]indol]-5-yl)-2thiophenecarbonitrile, 5-(3-Fluoro-4-methoxyphenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(2-Amino-5-pyrimidinyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)thione, 3-(1,2-Dihydro-2-thioxospiro[cyclopentane-1,3-[3H]indol]-5-yl)-5fluorobenzonitrile, 5-(3-chlorophenyl)-3,3-dimethyl-1,3-dihydro-2H-indole-2-thione, 3-Benzyl-5-(3-chlorophenyl)-3-methyl-1,3-dihydro-2H-indole-2-thione, 4-(3,3-dimethyl-2thioxo-2,3-dihydro-1H-indol-5-yl)-2-furonitrile, 5-(3-methoxyphenyl)-3,3-dimethyl-1,3dihydro-2H-indole-2-thione, 3-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-4-fluorobenzonitrile, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5yl)-3-pyridinecarbonitrile, 5-(3,4-Difluorophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(5-Chloro-2-thienyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-3-furancarbonitrilc, 5-(3-Chloro-4-fluorophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(3-Chloro-5fluorophenyl)spiro[cyclohexanc-1,3-[3H]indol]-2(1H)-thione, 5-(3,5-Difluorophenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(1,2-Dihydro-2thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-4-propyl-2-thiophenecarbonitrile, 5-(3-Fluoro-4-nitrophenyl)spiro[cyclohexanc-1,3-[3H]indol]-2(1H)-thione, 4-(1,2-Dihydro-2thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-2-furanearbonitrile, 5"-(3-Chlorophenyl)spiro[cyclobutane-1,3"-[3H]indol]-2"(1"H)-thione, 5"-(2-Chlorophenyl)spiro[cyclohexane-1,3"-[3H]indol]-2"(1"H)-thione, 5"-(4-Chlorophenyl)spiro[cyclohexaue-1,3"-[3H]indol]-2"(1"H)-thione, 5-(1",2"-Dihydro-2"-thioxospiro[cyclohexane-1,3"-[3H]indol]-5"-yl)-4-methyl-2thiophenecarbonitrile, 5-(1",2"-Dihydro-2"-thioxospiro[cyclohexane-1,3"-[3H]indol]-5"yl)-2-thiophenecarbonitrile, 5"-(3-Fluorophenyl)spiro[cyclohexane-1,3"-[3H]indol]-2"(1"H)-thione, 5-(3-Hydroxyphenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(3-chlorophenyl)-3,3-diethyl-1,3-dihydro-2H-indole-2-thione, 5-(4-Fluoro-3-(trifluoromethyl)phenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 4-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-2-fluorobenzonitrile,

5-(1,2-Dihydro-2-thioxospiro[cyclohexane-1,3-[3H]indol]-5-yl)-4-n-butyl-2thiophenecarbonitrile, 5-(3-Fluoro-5-methoxyphenyl)spiro[cyclohexane-1,3-[3H]indol]-2(1H)-thione, 5-(3-Chlorophenyl)-N-hydroxyspiro[cyclohexane-1,3'-[3H]indol]-2-amine, N-(Acetyloxy)-5'-(3-chlorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2"amine, 5'-(3-Fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(2-Fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oximc, 5'-(4-Fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3,4-difluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3-methoxyphenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3-nitrophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 5'-(3-cyanophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'(1'H)-one oxime, 3-(1',2'-Dihydro-2'-(hydroxyimino)spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-5fluorobenzonitrile, 5-(Spiro[cyclohexanc-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-4methyl-2-thiophenecarbonitrile, 5-(Spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-2-thiophenecarbonitrile, 4-(Spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-2-thiophenecarbonitrile, 5-(Spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-1H-pyrrole-1-methyl-2-carbonitrile, 5-(spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-1H-pyrrole-2-carbonitrile, 4-(Spiro[cyclohexane-1,3'-[3H]indol]-2'(acetoxyimino)-5'-yl)-2-thiophenecarbonitrile, 3-Fluoro-N'-hydroxy-5-(2'-(hydroxyamino)spiro[cyclohexane-1,3'-[3H]indol]-5'yl)benzenecarboximidamide, N'-Hydroxy-5-(spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-4-methyl-2-thiophenecarboximidamide, N'-Hydroxy-4-(spiro[cyclohexane-1,3'-[3H]indol]-2'-hydroxyimino)-5'-yl-2thiophenecarboximidamide, N'-Hydroxy-5-(spiro[cyclohexane-1,3'-[3H]indol]-2'-(hydroxyimino)-5'-yl)-2-thiophenecarboxidamide, 5'-(3-Chlorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 5'-(3-Cyano-5-fluorophenyl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 5'-(5-Cyano-1H-pyrrol-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2-ylidenecyanamide, 5'-(5-Cyano-thiophen-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 5'-(5-

Cyano-3-methyl-thiophen-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 5'-(5-Cyano-thiophen-3-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, 3-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-5-fluoro-benzonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-1H-pyrrole-2-carbonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-1-methyl-1H-pyrrole-2-carbonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-thiophene-2-carbonitrile, 5-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-4-methyl-thiophene-2-carbonitrile, and 4-(2'-Cyanomethylene-spiro[cyclohexane-1,3'-[3H]indol]-5'-yl)-thiophene-2-carbonitrile, or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

25(Original). The method according to claim 23, wherein said compound is 5'-(5-Cyano-1-methyl-1H-pyrrol-2-yl)spiro[cyclohexane-1,3'-[3H]indol]-2'-ylidenecyanamide, or a pharmaceutically acceptable salt, tautomer, metabolite, or prodrug thereof.

26(New). The method according to claim 1, wherein said prodrug is an ester or carbamate.

27(New). The method according to claim 23, wherein said prodrug is an ester or carbamate.